AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A microelectromechanical system comprising:

a substrate;

a platform attached to said substrate in a manner permitting said platform to be elevated in its entirety from said substrate; and

a lever arm attached to said substrate and pivotable in at least a first direction with respect to said substrate;

said platform being attached to said lever arm in a manner providing for inclination of said platform in at least the first direction in response to pivoting of said lever arm in the first direction, said lever arm being pivotable in response to an actuation force mechanically coupled thereto and generated without utilizing any portion of said lever arm and said platform.

2. (Original) The system of Claim 1 wherein said lever arm comprises an A-frame structure.

3. (Original) The system of Claim 2 further comprising:

at least one flexible member attaching a base of said A-frame structure to said substrate, said at least one flexible member being configured to permit pivoting of said A-frame structure in at least the first direction with respect to said substrate.

4. (Original) The system of Claim 1 further comprising:

a first compliant member attaching said platform to said substrate, said first compliant member being configured to permit elevation of said platform from said substrate to a desired height; and

a second compliant member attaching said lever arm to said platform, said second compliant member being configured to transmit force from said lever arm to said platform while permitting a point on said lever wherein said second compliant member is connected to swing through a first arc having a different radius than a second arc through which a point on said platform wherein said second compliant member is connected swings.

5. (Original) The system of Claim 4 wherein the second arc has a smaller radius than the

first arc.

6. (Original) The system of Claim 4 wherein said first and second compliant members comprise springs.

7. (Original) The system of Claim 1 wherein said platform is attached to said substrate and said lever arm in a manner providing for a change in an angle of inclination of said platform in the first direction with respect to said substrate exceeding a change in an angle of pivot of said lever arm in the first direction with respect to said substrate upon pivoting of said lever arm in the first direction with respect to said substrate.

8. (Original) The system of Claim 7 wherein said platform is attached to said substrate at a first location, said lever arm is attached to said platform at a second location, and said lever arm is attached to said substrate at a third location, said first location being between said second and third locations.

9. (Original) The system of Claim 1 further comprising:

an actuator microstructure formed on said substrate, said actuator microstructure being coupled to said lever arm such that said actuator microstructure is operable to effect pivoting of said lever arm in at least the first direction with respect to said substrate.

10. (Original) The system of Claim 9 wherein said actuator microstructure is operable without external feedback control to effect pivoting of said lever arm in at least the first direction with respect to said substrate such that said platform is inclinable in at least the first direction at any desired angle with respect to said substrate within a specified range of angles.

11. (Original) The system of Claim 10 wherein the specified range of angles is between zero and ninety degrees.

12. (Original) The system of Claim 10 wherein said actuator microstructure comprises an electrostatic actuator operable in response to a control voltage applied across terminals thereof.

13. (Original) The system of Claim 9 further comprising:

a tether coupling a laterally moveable output of said actuator microstructure to said lever arm.

14. (Original) The system of Claim 13 further comprising:

a displacement multiplier coupling said tether to said laterally moveable output of said actuator microstructure, said displacement multiplier being configured for amplifying lateral movement of said moveable output of said actuator microstructure into larger lateral movement of said tether.

15. (Original) The system of Claim 13 wherein said actuator microstructure comprises a plurality of separate actuators having separate laterally moveable outputs, and said system further comprises:

a yoke coupling said laterally moveable outputs of said plurality of separate actuators together.

16. (Original) The system of Claim 1 further comprising:

at least one fuse securing said platform to said substrate, said at least one fuse being configured for releasing said platform from said substrate upon at least one of application of at least a predetermined voltage across said fuse and application of a pulse of electromagnetic energy to said fuse.

17. (Original) The system of Claim 1 further comprising:

at least one pre-stressed elevator attached to said substrate, said pre-stressed elevator being configured for elevating said platform to a predetermined height from said substrate upon release of said platform.

18. (Original) The system of Claim 1 wherein said platform is inclinable in at least the first direction at an angle with respect to said substrate exceeding forty-five degrees.

19. (Original) The system of Claim 1 wherein said platform includes at least one of an optically reflective surface, a diffraction grating, a lens, and an optical polarizer.

20. (New) A microelectromechanical system comprising:

a substrate;

a platform attached to said substrate in a manner permitting said platform to be elevated in its entirety from said substrate; and

a lever arm attached to said substrate and pivotable in at least a first direction with respect to said substrate, said lever arm comprising an A-frame structure;

said platform being attached to said lever arm in a manner providing for inclination of said platform in at least the first direction in response to pivoting of said lever arm in the first direction.

21. (New) The system of Claim 20 further comprising:

at least one flexible member attaching a base of said A-frame structure to said substrate, said at least one flexible member being configured to permit pivoting of said A-frame structure in at least the first direction with respect to said substrate.

22. (New) A microelectromechanical system comprising:

a substrate;

a platform attached to said substrate in a manner permitting said platform to be elevated in its entirety from said substrate;

a lever arm attached to said substrate and pivotable in at least a first direction with respect to said substrate;

an actuator microstructure formed on said substrate, said actuator microstructure being coupled to said lever arm such that said actuator microstructure is operable to effect pivoting of said lever arm in at least the first direction with respect to said substrate; and

a tether coupling a laterally moveable output of said actuator microstructure to said lever arm;

said platform being attached to said lever arm in a manner providing for inclination of said platform in at least the first direction in response to pivoting of said lever arm in the first direction.

23. (New) The system of Claim 22 further comprising:

a displacement multiplier coupling said tether to said laterally moveable output of said actuator microstructure, said displacement multiplier being configured for amplifying lateral movement of said moveable output of said actuator microstructure into larger lateral movement of said tether.

24. (New) The system of Claim 22 wherein said actuator microstructure comprises a plurality of separate actuators having separate laterally moveable outputs, and said system further comprises:

a yoke coupling said laterally moveable outputs of said plurality of separate actuators together.

25. (New) A microelectromechanical system comprising:

a substrate;

a platform attached to said substrate in a manner permitting said platform to be elevated in its entirety from said substrate;

a lever arm attached to said substrate and pivotable in at least a first direction with respect to said substrate; and

at least one fuse securing said platform to said substrate, said at least one fuse being configured for releasing said platform from said substrate upon at least one of application of at least a predetermined voltage across said fuse and application of a pulse of electromagnetic energy to said fuse;

said platform being attached to said lever arm in a manner providing for inclination of said platform in at least the first direction in response to pivoting of said lever arm in the first direction.

26. (New) A microelectromechanical system comprising:

a substrate;

a platform attached to said substrate in a manner permitting said platform to be elevated in its entirety from said substrate;

a lever arm attached to said substrate and pivotable in at least a first direction with respect to said substrate; and

at least one pre-stressed elevator attached to said substrate, said pre-stressed elevator being configured for elevating said platform to a predetermined height from said substrate upon release of said platform;

said platform being attached to said lever arm in a manner providing for inclination of said platform in at least the first direction in response to pivoting of said lever arm in the first direction.